

1,354; Uvalde, Texas, 1,453; Lynchburg, 1,896; Nashville, 2,153; Springfield, Mass., 2,290; Eagle Pass, Texas, 2,317; Augusta, 2,346; Davenport, 2,438; Fredericksburg, Texas, 2,481; Griffin, Texas, 2,660.

VERIFICATIONS.

Indications.—The detailed comparison of the tri-daily weather indications with the telegraphic reports, for the succeeding twenty-four hours, shows a general percentage of omissions of 0.1 per cent, and of verifications, of 87.1 per cent. The percentage of verifications for the four elements have been: weather, 92.7; wind, 89.7; temperature, 85.1; barometer, 81.0. The percentages of verifications by geographical districts have been: New England, 84.4; Middle States, 87.6; South Atlantic States, 89.5; East Gulf States, 91.9; West Gulf States, 91.2; Lower Lake region, 86.7; Upper Lake region, 87.6; Tennessee and Ohio valley, 82.3; Upper Mississippi valley, 86.8; Lower Missouri valley, 83.2. Of the 3,716 predictions that have been made, 99, or 2.7 per cent are considered to have entirely failed; 124, or 3.3 per cent were one-fourth verified; 450, or 12.1 percent were half verified; 242, or 6.5 per cent were three-fourths verified; 2,801, or 75.4 per cent were fully verified, so far as can be judged from the weather maps.

Cautionary Signals.—During the month 39 Cautionary Signals were displayed; 30 or 77 per cent., were justified by subsequent hourly velocities of 25 miles or over at, or within, 100 miles of the station. Forty-five cases were reported, generally from scattered stations, of winds of 25 miles or over, when signals were not ordered.

NAVIGATION.

Stages of Water in Rivers.—In the table on the right-hand side of chart No. III are given the highest and lowest readings of the Signal Service river gauges during the month, with the dates of same. An examination of this table shows that the highest waters generally occurred on the 1st of the month, after which the rivers generally continued falling. Omaha, during month, river channel has been gradually changing towards Nebraska shore, and old channel filling with sand; on the 26th the river gauge was surrounded by a substantial sand bar. Pembina, Dak., 27th, navigation on Red river becoming difficult, owing to low water. Pittsburgh, 26th, navigation entirely suspended, river one foot and falling.

High Tides.—Mt. Desert, Me., 2nd, extremely high tides.

ATMOSPHERIC ELECTRICITY.

Thunder-storms.—1st, Md., Mass., N. J., N. Y., Pa., Mich., Can., Col., Conn., Ill., Ind., Kan., Ohio, Vt., Iowa, W. Va., Ga., S. C., R. I., Ky. 2nd, Mass., Va., R. I., Ala., Dak., Ga., N. Y., Can., Col., Conn., Fla., Ill., Ind., Iowa, Kan., Me., Mo., Neb., N. H., N. J., N. C., Ohio, Tenn., Tex., Vt., Ky., Minn., Ind. Ty. 3rd, Can., Col., Ind., Iowa, Kan., Me., Mass., Mich., Neb., N. Y., Ohio, Pa., Tex., Vt., Va., Wis., Ala., W. Va., Fla., Ga., S. C., N. C., Ky. 4th, N. J., N. Y., Va., Dak., Can., Conn., Fla., Ill., Ind., Iowa, Kan., Me., Mass., Mich., Mo., Neb., Ohio, Pa., Vt., Wis., W. Va., Ga., Minn., Tex., W. Ty. 5th, Md., N. J., Va., Mich., N. Y., Col., Ind., Me., N. C., Ohio, Pa., Vt., Wis., N. M., Tenn., S. C., Ga., N. H., Mon. 6th, Md., Mass., N. J., N. Y., Pa., Dak., Can., Col., Conn., Fla., N. H., Vt., Va., Utah, Ala., Mich., W. Va., W. Ty. 7th, N. Y., Col., Fla., Iowa, Mass., N. H., Tenn., Vt., Minn. 8th, N. Y., Mass., Dak., Can., Col., Conn., Fla., Ill., Ind., Iowa, Mich., Neb., N. H., N. J., Ohio, Pa., Vt., Wis., N. C. 9th, Md., Kan., N. Y., Dak., Neb., Col., Conn., Ill., Ind., Iowa, Me., Mass., Mo., N. H., Ohio, Vt., Fla., Ky. 10th, Md., Va., Col., Ill., Ind., Kan., Mich., Miss., N. J., Ohio, Tenn., N. M., Ga., Mo., Ind. Ty. 11th, Va., Ala., Ind. Ty., Col., Ill., Me., Mass., N. H., N. Y., N. C., Pa., Tex., Ohio, Tenn., Fla., R. I., Dak., Minn. 12th, Dak., Iowa, Tex., Ala., Mich., N. C., Minn., Wis. 13th, Ga., N. Y., Ala., Kan., Ill., Ind., Iowa, Me., Mich., Neb., S. C., Vt., Wis., Fla., Dak., W. Ty., Nev. 14th, Kan., Mich., Ga., Can., Fla., Ill., Ind., Iowa, Mo., Neb., N. Y., Ohio, S. C., Tenn., Ala., Nev. 15th, Va., Mich., N. Y., Ala., Col., Kan., Can., Ill., Ind., Iowa, Neb., N. C., Ohio, Pa., Vt., Ky., Idaho, Nev. 16th, N. J., Va., Mich., N. Y., Dak., Can., Conn., Fla., Ind., Mass., N. C., Ohio, Pa., Utah, Ala., W. Va., Tenn., Mont., Idaho, Nev. 17th, Va., N. Y., Dak., Conn., Ill., Iowa, Me., Mass., N. H., N. J., Pa., Vt., Wis., Utah, R. I., N. M. 18th, Va., N. Y., R. I., Ill., Ind., Ga., Me., Mass., Ohio, Vt., Wis., Ga., N. C., Tex. 19th, Va., Dak., Fla., Ill., Ind., Iowa, Miss., Neb., N. C., Ohio, Tenn., Ky. 20th, Ga., Pa., Va., Fla., Ill., Ind., Iowa, Me., Neb., N. C., Tenn. 21st, N. J., N. Y., Ala., Dak., Ga., Conn., Fla., Mo., Pa., Tenn., Va., Ill., N. C., Minn., Tex., Mont. 22nd, Minn., Wy., Ty., Fla., Miss., Utah, Iowa, N. C. 23rd, Ala., Dak., Cal., Ill., Iowa, Kan., Mass., Mich., N. J., Wis., N. M. 24th, Pa., Kan., Cal., Ill., Ind., Iowa, Ohio, N. Y. 25th, Md., N. J., R. I., Col., Conn., Ill., Ind., Iowa, Kan., Mass., Ohio, Tenn., Vt., N. M., Ind. Ty. 26th, Ala., Dak., Iowa, Kan., N. M., Tex., Tenn., Nev. 27th, Ga., Minn., Neb., Col., Iowa, Kan., N. C., Wis., Mich. 28th, Minn., Ala., Ind. Ty., Ind., Mich., N. Y., Ohio, Pa., Tenn., Tex., Mont., Idaho. 29th, Va., N. Y., Col., Fla., Me., Miss., Pa., S. C., Tex., Vt., Tenn., Ga., N. C. 30th, Ga., Dak., Fla., Me., Ohio, Tenn., N. C. 31st, Dak., Neb., Col., Fla., Ill., Ind., N. C., Ohio.

Auroras.—Pembina, Dak., 1st, 2nd; Escanaba, Mich., 6th; Newbury, Vt., 2nd; Mt. Washington, 3rd; Bangor, Me., 8th; Empire City, Kan., 21st; Springfield, Mass., 23rd; Clear Creek, Neb., 1st, 2nd, 7th, 18th, 24th, 27th.

Magnetic Phenomena.—Prof. G. Hinrichs, Iowa City, Ia., reports the average magnetic diurnal range in declination as 10.20 minutes.

Telegraphic Communication interfered with by Atmospheric Electricity.—Santa Fe, N. M., 5th, 7th, 10th, 11th, 17th, on wires; 23rd, 25th, instrument cut out; 26th, 27th, 28th, 29th, on wires. Boerne, Tex., 4th, 12th; Pembina, Dak., 12th, 27th, strongly felt on line; Grand Haven, Mich., 13th; Barnegat, N. J., 21st, 3 p. m. instruments cut out; Mt. Washington, N. H., 2nd, 2 p. m., severe on wires.